NOTE ON THE SOMERSET COUNTY COAL BEDS IN PENNSYLVANIA.

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In a recent professional visit to Somerset county, I obtained a vertical section of a portion of the Lower Coal Measures. As this part of the State has been, until quite recently, shut out from investigation, I presumed that this scale would be interesting, and I respectfully submit it.

The section was obtained from recent coal exploratians, near the village of Garrett, on the Pittsburg and Connellsville Railroad. At this place, the Seral Conglomerate is very clearly developed, rising gently westward on the eastern flank of Negro Mountain.

Negro Mountain, or rather the Anticlinal bearing this name, plows up the middle of the first great basin, dividing it, at this place, into two shallow troughs having their greatest depth of coal measures near Meyer's Mills and Bear Creek—the whole lying between the Alleghany Mountain on the east, and Laurel Hill on the west.

Over the back of Negro Mountain, the coal measures and conglomerate have been swept away, leaving uncovered the red back of this large anticlinal.

Castleman's River cuts deeply across the Negro Mountain anticlinal, unfolding a natural geological section, which has been further elaborated by the railroad cuttings along its northern bank—the whole affording unusual facilities for studying Formations XI and XII, with the posture and stratigraphy of the coal measures shoreing on either flank.

Beginning in the railroad cutting, immediately west of Garrett Station, the Seral Conglomerate can be studied up to its floor. In this cutting, a thin seam of impure coal has been brought to light. It also exhibits a rather unusual plunge of the strata eastward, carrying the measures down 300 feet in three quarters of a mile—with this exception, the measures exist under very gentle dips.

The Conglomerate, in its mechanical structure and general appearance, resembles very closely Broad Top and Clearfield.

I did not obtain its total thickness but examined over 300 feet of it, which indicates a greater depth than at Broad Top.

The floor line is distinctly marked in a bold cliff outcrop, 10 feet deep, of rather massive Conglomerate, slashed with clearage planes.

On this rests a belt composed, at its base, of thin plates of sandstone graduating into shales and blackslate as it approaches the (A) coal seam. The division has been terraced with a flat slope, from the brow of the Conglomerate to the coal seam, profiling the two horizons very distinctly.

The first coal seam rests on a thin floor of fireclay. The coal bed has

two benches, the lower, 18 inches thick, is an impure cannel coal inclining to block structure—the upper is a medium quality of semi-bituminous coal with the well marked columnar structure peculiar to the Alleghany coals.

The interval between this and the next small coal seam is composed of thin plates of sandstones with olive colored shales.

The second workable seam (B) is pre-eminently *the bed* of the Lower system of coal measures. Not perhaps so much from its size and good quality of coal, as from its ready and sure identification, wherever it exists, by the massive bed of limestone on which it rests. The farmers trace it from hillside to hillside, regarding it with peculiar affection as a *double gift*—not only supplying fuel for domestic use, but also lime to enrich the "glades" in their mountain farms.

The coal in this bed is columnar in structure with plates of mineral charcoal disseminated.

In structure and quality it is closely associated with the best Clearfield coal. It will be found a superior fuel for iron working.

The third seam (C) is all pure coal of an excellent quality, but as the bed is high in the measures and does not occupy a wide area in this portion of the field, it has as yet received little attention.

From seam B to the top of the scale the measures are composed of very soft flesh and olive colored shales, which have been rounded and softened into easy rolling slopes and rounded hills.

Some pieces of the blue and drab colored carbonate iron ores of the coal measures were shown me, but their places in the scale were not clearly made out.

The coals from the Lower Measures have thus far only found a local demand. Evidently the time has not come, or the right channel been opened to this great ocean of mineral fuel. It is yet like the Dead Sea, it has no outlet. True, the Pittsburgh and Connellsville railroad has opened channels to the markets east and west, but the law of supply from the large and excellent "Pittsburgh seam," west and east, is found as inexorable as the law of gravity, in holding back the Somerset lower coals, for the present at least.

There is one channel to market which is being discussed, that is, by the opening of a railroad connection of 35 miles from Berlin to Mann's Choice on the Bedford Division of the Pennsylvania Railroad. This would furnish a channel for these coals to flow into market side by side with the Broad Top, Clearfield and Cumberland Coals.

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